

What is claimed is:

1. A process for blocking a device for detection
5 of biochemically active molecules which comprises the steps of:

bringing in the presence of an aqueous medium a de-
tection device having probe molecules, ionic reactive
groups, and non-ionic reactive groups on a surface there-
of, into contact with compounds which react with the non-
10 ionic reactive groups to produce covalent bondings and
compounds which form electrostatic bondings in conduction
with the ionic reactive groups, simultaneously or sepa-
rately; and

15 washing the surface of the detection device with an
aqueous solvent or a water-miscible solvent.

2. The process of claim 1, wherein the compounds
which react with the non-ionic reactive groups to produce
20 covalent bondings and the compounds which form electro-
static bondings in conduction with the ionic reactive
groups are present in one aqueous solution.

3. The process of claim 1, wherein the aqueous
25 medium contains a surface active agent.

4. The process of claim 1, wherein the ionic reac-
tive groups are amino groups or mercapto groups.

30 5. The process of claim 1, wherein the ionic reac-
tive groups are amino groups and the compounds which form
electrostatic bondings in conduction with the ionic reac-
tive groups are dextran sulfates.

35 6. The process of claim 1, wherein the non-ionic
reactive groups are ethylenic unsaturated groups.

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7. The process of claim 6, wherein the ethylenic unsaturated groups are vinylsulfonyl groups or their precursors having the formula:



wherein each of R^1 , R^2 and R^3 independently is a hydrogen atom, an alkyl group having 1 to 6 carbon atoms, an aryl group having 6 to 20 carbon atoms, or an aralkyl group having 7 to 26 carbon atoms in which its alkyl group has 1 to 6 carbon atoms, and L is a linking group.

8. The process of claim 1, wherein the non-ionic reactive groups are ethylenic unsaturated groups and the compounds which react with the non-ionic reactive groups to produce covalent bondings are amino group-containing compounds.

9. The process of claim 8, wherein the amino group-containing compounds are glycines.

10. The process of claim 1, wherein the probe molecules are nucleotide derivatives selected from the group consisting of oligonucleotides, polynucleotides, and peptide nucleotic acids.

11. The process of claim 1, wherein the probe molecules, ionic reactive groups, and non-ionic reactive groups are fixed on the detection device by covalent bonding.

12. A device for detection of biochemically active molecules which is blocked by the process of claim 1.

13. An aqueous solution containing an amino group-containing compound showing a positive charge, an acidic compound showing a negative charge, and an anionic surface active agent.

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14. The aqueous solution of claim 13, wherein the amino group-containing compound is glycine, and the acidic compound is dextran sulfate.

10 15. A process for blocking a device for detection of biochemically active molecules which comprises the steps of:

15 bringing in the presence of an aqueous medium a detection device having probe molecules and ionic reactive groups on a surface thereof, into contact with compounds which form electrostatic bondings in conduction with the ionic reactive groups; and

20 washing the surface of the detection device with an aqueous solvent or a water-miscible solvent.

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16. The process of claim 15, wherein the aqueous medium contains a surface active agent.

25 17. The process of claim 15, wherein the ionic reactive groups are amino groups or mercapto groups.

30 18. The process of claim 15, wherein the ionic reactive groups are amino groups and the compounds which form electrostatic bondings in conduction with the ionic reactive groups are dextran sulfates.

35 19. The process of claim 15, wherein the probe molecules are nucleotide derivatives selected from the group consisting of oligonucleotides, polynucleotides, and peptide nucleotic acids.

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20. The process of claim 15, wherein the probe molecules are fixed on the detection device by electrostatic bonding and ionic reactive groups are fixed on the detection device by covalent bonding.

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21. A device for detection of biochemically active molecules which is blocked by the process of claim 15.

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